NATURAL RESOURCES AND OPEN SPACE

Open Space Criteria

Criteria has been used to identify and prioritize open space areas in need of protection for the benefit of the community. The priorities are based, in part, on the inclusion of areas that are already constrained, including flood zones, rare plant and wildlife habitat, and slopes over 30%, as shown on the Key Open Space Areas figure (Figure 2.1). Most of the areas identified for protection in this document fall into multiple categories, fulfilling a number of criteria for protection.

Watershed Function

Watershed function areas include perennial streams; natural and man-made drainageways, and landscape or habitat buffers adjacent to these drainageways; critical flood pools, floodways, and floodplains; stormwater storage; and groundwater recharge areas.

Drainageway

Wildlife Habitat and Connecting Corridors

Wildlife habitat includes primary plant communities found in the area. Corridors connecting large open space areas promote habitat functionality, species migration, and biodiversity. Mule deer migration corridors require particular attention for protection.

Sensitive Plant Communities

Rare and sensitive plant communities are defined by the Nevada Natural Heritage Program, which maintains a database of rare plants in the state, as well as maps that identify local occurrences of these plants.

Webber's ivesia, a rare plant species in Reno

Existing Development Constraints

Existing development constraints are defined as slopes greater than 30%. Development is generally not permitted on these slopes by the existing development code.

Equity

All of Reno's residents should have access to open space areas. However, Reno's most significant open spaces are concentrated along the Truckee River and around the mountainous periphery of the City, with some neighborhoods better served by open space access and amenities than others. Projects that provide lesser-served neighborhoods with increased access and amenities should be given priority.

Ease of Implementation

Ease of implementation includes such factors as cost, availability of land, and intangible elements such as project support.

Proposed Open Space Priority Areas

The open space criteria have been used to prioritize open space areas for protection as identified in Figure 2.1, Key Open Space Areas. All four of the proposed projects ranked high for most of the open space criteria listed above. Secondary priorities are also identified in Appendix B of this plan and should be reviewed after the first priorities have been addressed.

Figure 2.1 Key Open Space Areas

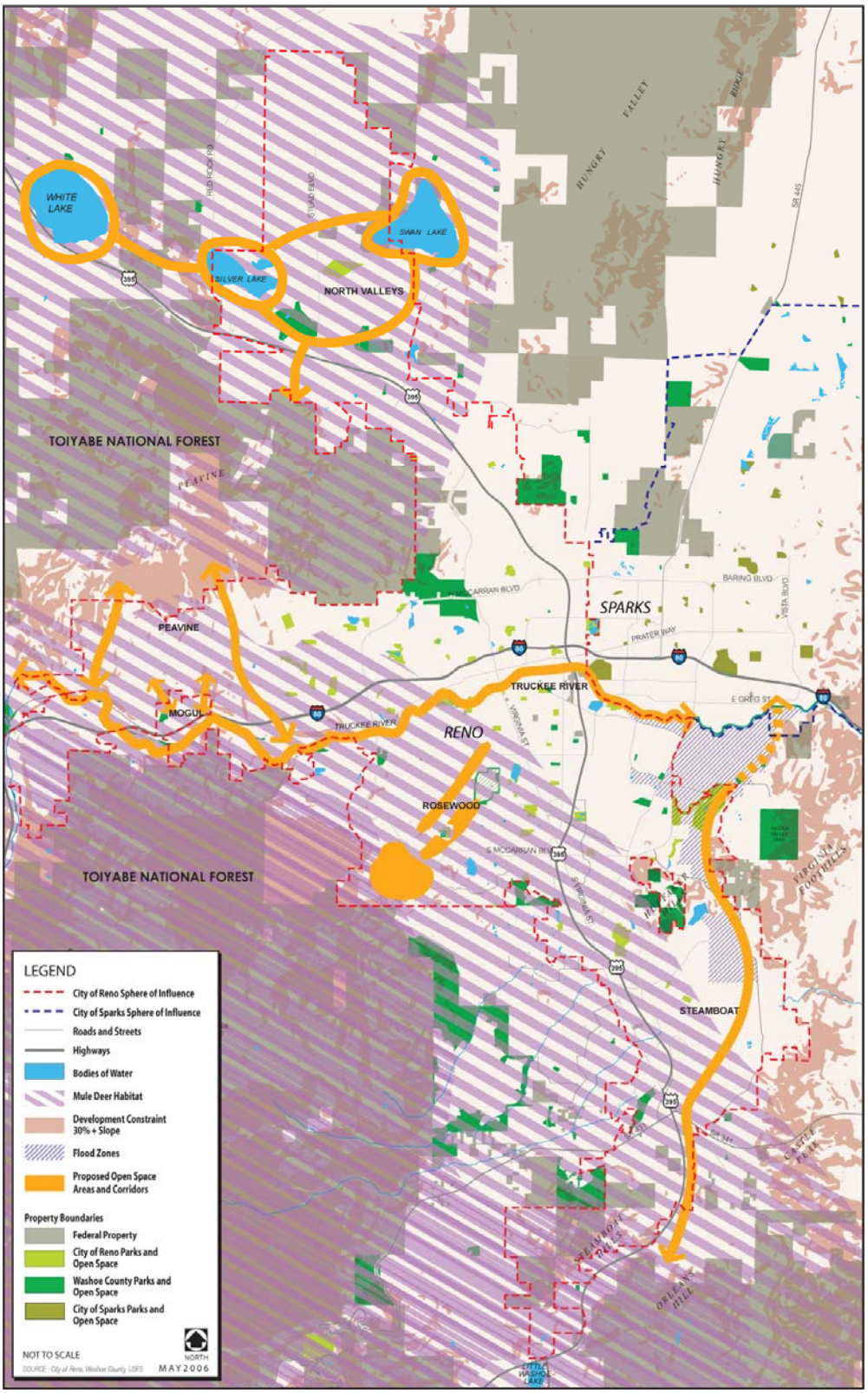


Figure 2.2 North Valleys Open Space Areas

North Valleys Playas

Three playa lakes, White Lake, Silver Lake, and Swan Lake, are located in the North Valleys area, as shown in Figure 2.2. Each lake is unique and offers slightly different open space opportunities. All three playas provide watershed functions, wildlife and native plant habitat, opportunities for connectivity, and recreational opportunities. These areas should be preserved, or where disturbed, restored to their native conditions to maximize habitat values. The setting, characteristics, and open space opportunities for each lake are described below.

<u>White Lake</u>

White Lake is bordered by residential development on the north with sporadic commercial and light industrial development to the east and south. The lake is owned by a limited number of private landowners.

White Lake, view to west

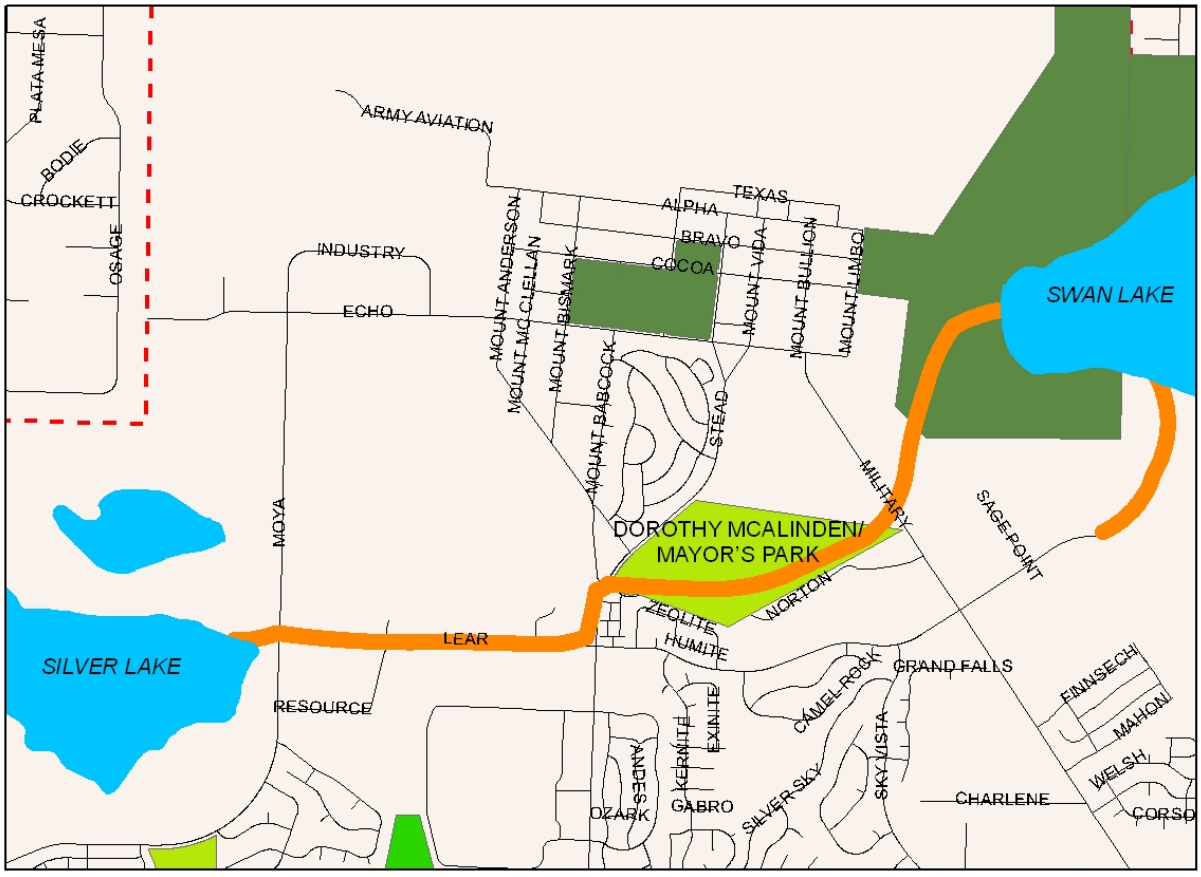
White Lake provides significant groundwater recharge and watershed protection value, offers visual relief, and serves as a large open space node with potential corridors connecting to Peavine Peak and the surrounding hills.

The undeveloped land surrounding White Lake is a mixture of seasonal wetland and sage scrub that should be preserved as an open space buffer between the lake and surrounding development. Trails and lake access could be accommodated in this buffer.

Silver Lake

Silver Lake is bordered by residential development to the north and south, with light industrial and commercial development to the east. Silver Lake and the lands around it are owned by a limited number of private landowners. Silver Lake offers groundwater recharge value, and includes a sage scrub zone that should be preserved as an open space buffer.

Figure 2.3 Swan Lake to Silver Lake Connection



Silver Lake should be part of a larger system of open space corridors in the Stead area. Trails could be developed around the southern perimeter of the lake that connects to the North Valleys Regional Park. This corridor/trail system could be further developed to connect Silver Lake with Swan Lake through the existing neighborhoods via existing drainages east of Stead Boulevard. The final northern connection from Swan Lake to

Silver Lake should be made via Dorothy McAlinden, Mayor's Park, and drainageways connecting these parklands to Swan Lake across Military Boulevard. Connectivity is lost through the light industrial area to the west along Lear and Stead Boulevards. Patches of BLM land between Silver and White Lakes could be set aside as an established open space corridor. Suitable pedestrian and cyclist crossings at Reno Parkway Boulevard and Red Rock Road are also needed.

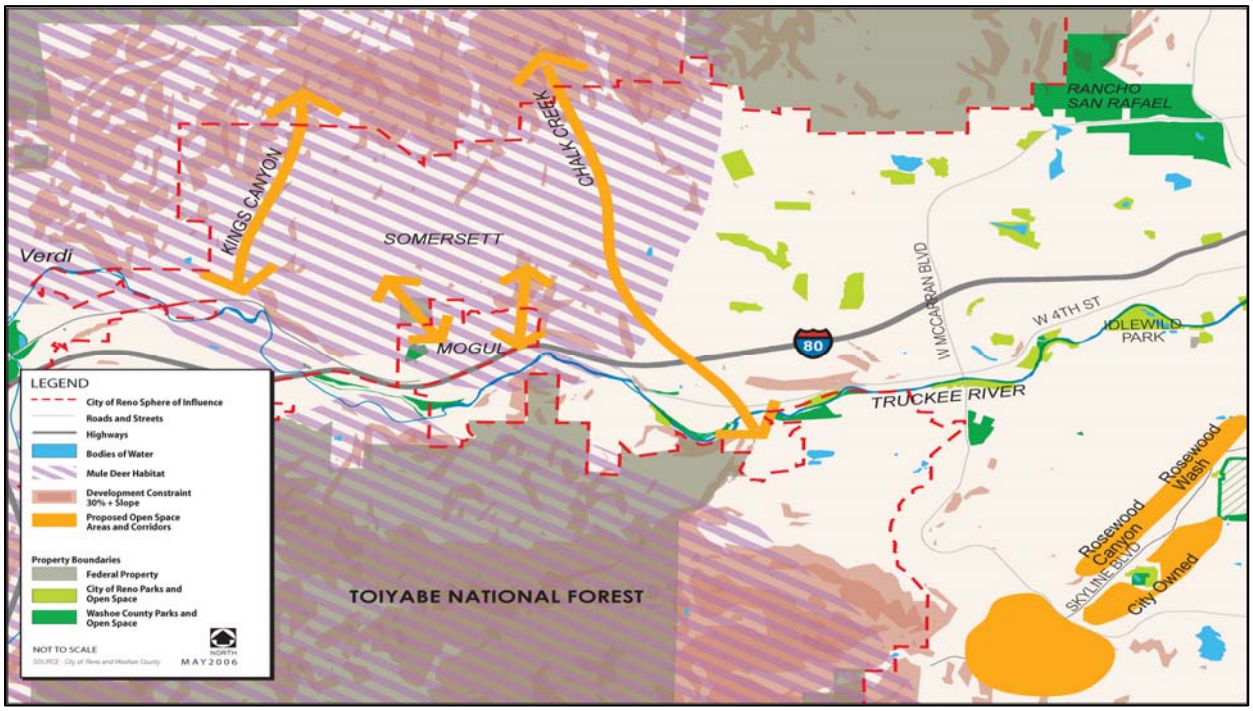
Swan Lake

Swan Lake wetlands

Swan Lake is bordered by low density residential development. The playa ranges from 50 to 100 acres of permanent wetlands during drought cycles to as much as 1,000 acres of wetlands during high water cycles. The lake is primarily publicly owned by the BLM, Washoe County, and Nevada National Guard, with the remaining property consisting of private in-holdings. Effort has been made in recent years to acquire private parcels from willing sellers using conservation funding. This area of public land should be rezoned to open space.

According to the Lahontan Audubon Society, Swan Lake is an important bird area, with 150 recorded bird species, including unusual migrants such as tundra swans and snow geese. The lake serves as an important nesting site for resident birds, and a foraging site for winter migrants. Large numbers of shorebirds and wading birds depend on Swan Lake as a migration stopover, staying days to weeks as they forage in the shallow waters. The Lemmon Valley Sewage Treatment Facility system of ponds immediately adjacent to the lake also provides nesting, feeding, and migratory resting areas for significant bird populations, especially when Swan Lake is frozen over during the winter months. Swan Lake is an active interpretive site with kiosks, reader boards, a marsh boardwalk, bus parking, and trails. It is being managed through the Washoe County Parks and Open Space Department with management guidelines drawn up by the eight cooperating agencies.

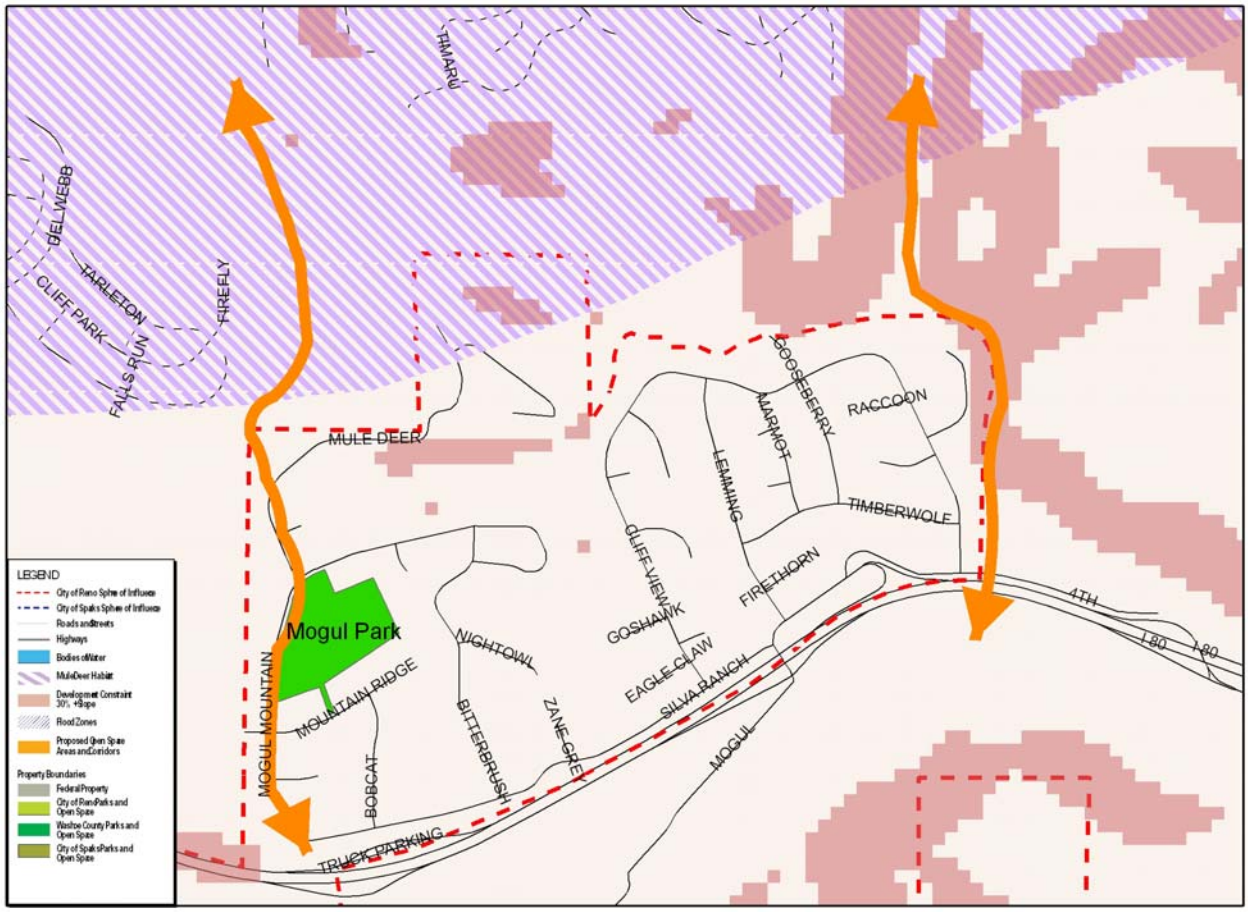
Figure 2.4 Peavine Peak Open Space Corridors



Significant Drainageways on Peavine Peak and Mount Rose Base

There are several significant drainageways and mule deer migration corridors connecting Peavine to the Truckee River, as shown in Figure 2.4. Portions of these drainageways fall within the Reno SOI, while other segments are within the unincorporated county. These drainageways include riparian areas along the drainage bottom, with sagebrush scrub along the adjacent drainageway slopes, creating an interesting and diverse assemblage of plant and animal species in close proximity.

Figure 2.5 Mogul Open Space Corridors



<u>Mogul</u>

A drainage connecting the Somersett subdivision with Mogul is slated for a paved trail in the Somersett development plan and will provide recreational access between the two neighborhoods. An unnamed creek is located south of Somersett in a steep canyon to the west of this trail. The creek has intact riparian vegetation that supports a variety of wildlife, including deer, coyote, small mammals, and birds. The upper and middle reaches of the creek include an existing multi-use trail. A portion of the middle reach of the creek passes through a 40-acre parcel owned by the USFS (APN 234-021-05), which is a good candidate for acquisition to provide wildlife habitat and public access. The lower reach of the creek is located in the Mogul neighborhood and shows significant noxious weed infestation, which makes it suitable for restoration. The entire creek should be protected, the multi-use trail extended, and access points developed.

Chalk Creek

Chalk Creek flows somewhat parallel to Robb Drive, east of McQueen High School. The creek also provides riparian habitat supporting numerous plant and animal species. An existing shared use trail has been developed along a portion of the trail that could be extended. This drainageway should also be protected, the shared use trail extended, and additional access points provided. Noxious weed infestations should be addressed, as needed, to restore native habitat.

Existing trails that follow lower elevation contours on Peavine provide recreational access from numerous locations. These trails have the potential to be consolidated into a continuous east/west contour trail connecting Rancho San Rafael Regional Park with Verdi. This trail corridor could also serve as an open space buffer between residential development and public lands on Peavine.

Rosewood Canyon and Rosewood Wash

Rosewood Wash

Rosewood Canyon and Rosewood Wash make up a large, intact drainageway on the north side of Skyline Drive at the base of the Sierra Range in west Reno. The canyon is comprised of the narrower upper reaches of the drainageway between Hemlock Way and Corey Drive, and is bisected by Cashill Boulevard. A portion of Steamboat Ditch runs through the canyon. The wash includes the lower, relatively flatter portion of the drainageway between Corey Drive and Belford Road. A portion of the Highland Ditch runs through the wash. Lands along the canyon and wash are privately owned. The area also includes portions of Steamboat and Highland Ditches.

Another unnamed canyon runs parallel to Rosewood Canyon that is partially owned by the City and partially privately owned. This canyon would also serve as a valuable asset to the network.

Both canyons and the wash include riparian habitat with native cottonwoods and willows at the base of the drainageway, and sagebrush scrub on the upper slopes. The proximity of these habitat zones results in an abundance of wildlife, including raptors, songbirds, and small mammals.

The area thus offers significant wildlife viewing opportunities. The area may be suitable primarily for pedestrian and bicycle use, as the steep slopes make erosion a concern for motorized uses, and the canyon may not allow for sufficiently wide trails to support equestrian uses.

Figure 2.6 Southwest Open Space Corridors

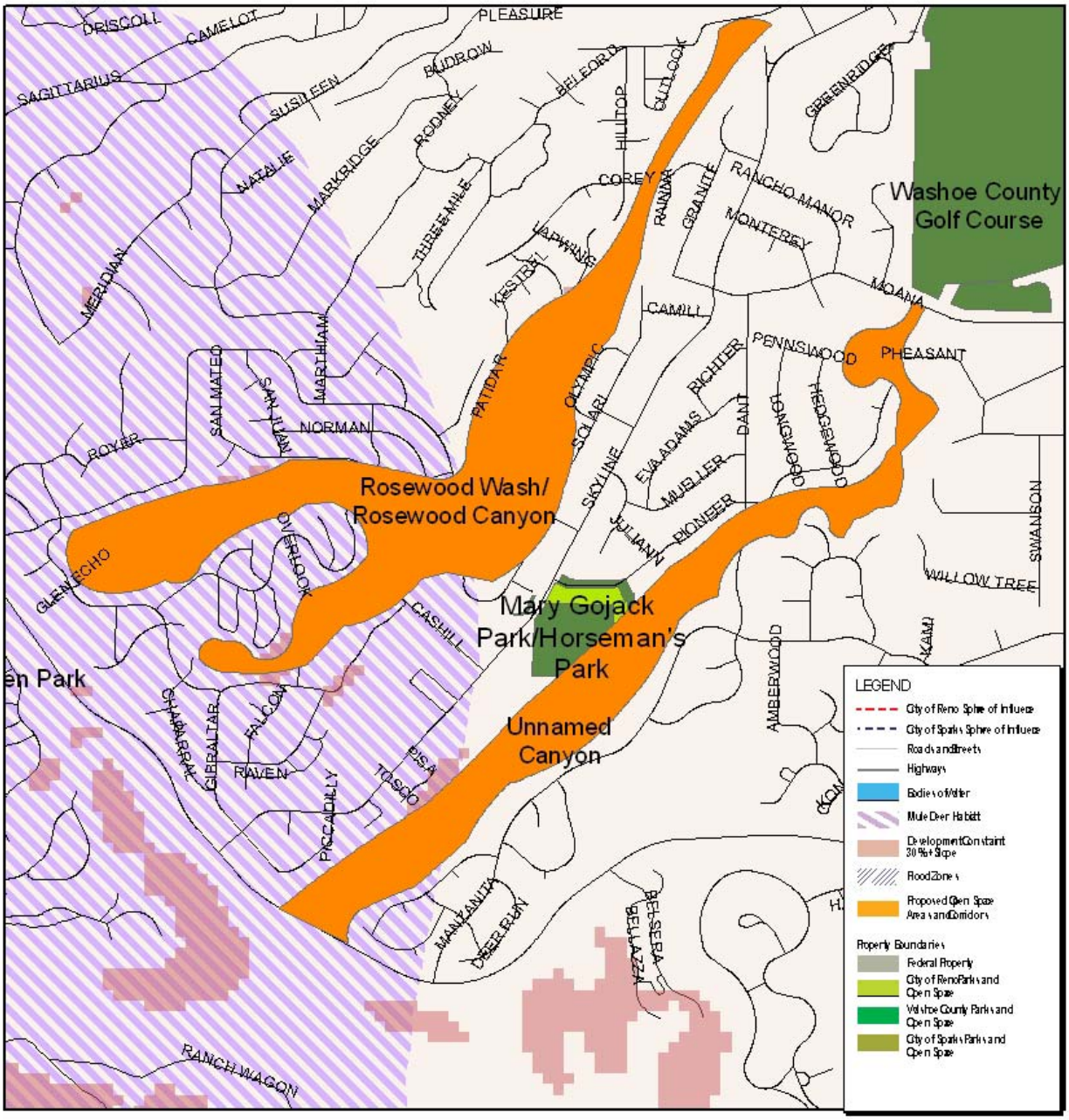
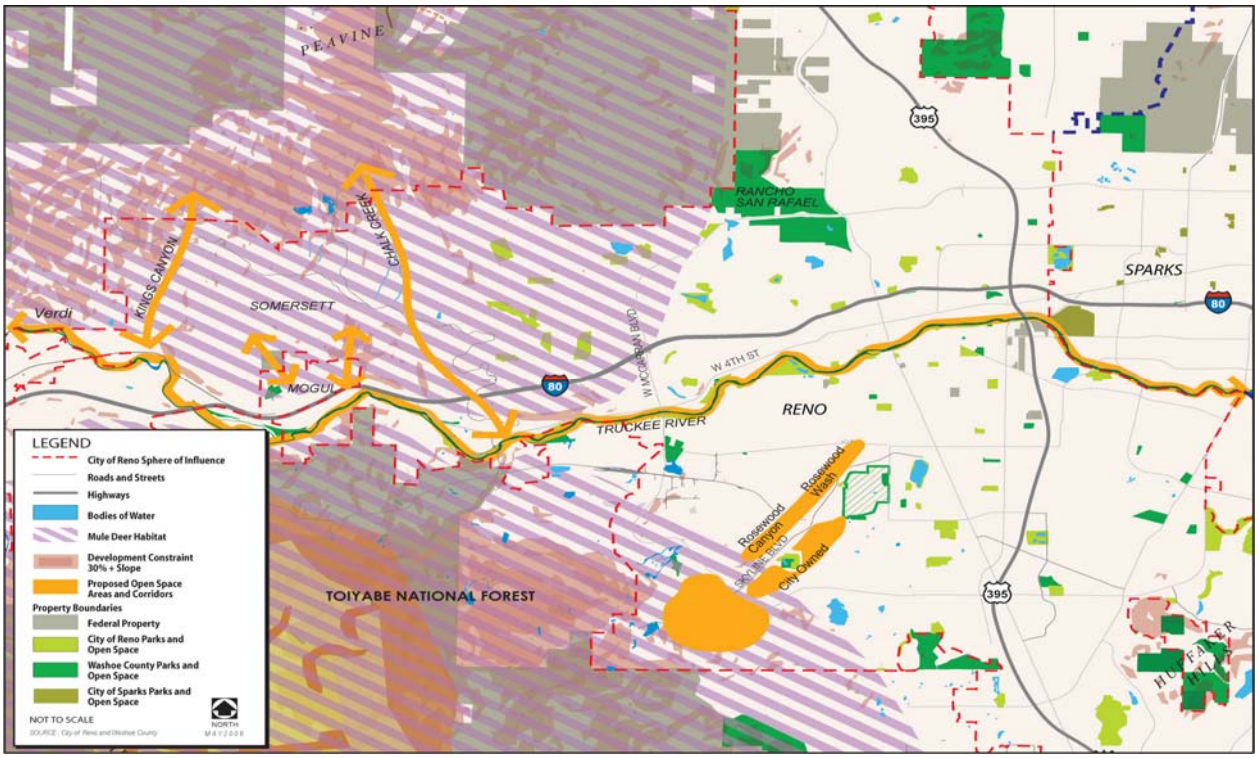


Figure 2.7 Truckee River Open Space



Truckee River Corridor

The Truckee River is the most significant natural resource in the plan area. Native riparian habitat still exists along much of the river, supporting associated animal species. Oxbow Nature Study Area, a largely intact segment of river habitat, supports populations of beaver and muskrat, as well as numerous bird species. A number of more developed parks along the river, such as Idlewild Park, include both native riparian habitat adjacent to the river, and nearby developed areas with non-native, ornamental plant species.

Cottonwoods along the Truckee River

A small portion of the Truckee River within the Reno SOI is subject to the Truckee Meadows Flood Control Project. This project is intended to restore riparian habitat, while also serving to minimize flood damage and extend recreational access in the area.

Segments of the river further upstream should also be subject to efforts to preserve and restore native habitat; enhancing the area's capacity as a functioning wildlife corridor. Other areas, such as portions of the Downtown Redevelopment Districts, may be more suitable for a combination of restored native habitat with developed urban parks. Key

areas that could benefit from open space acquisition and restoration are mentioned below.

Downtown Redevelopment

A portion of the river approximately between Bell Street and Wells Avenue is within Downtown Redevelopment District One. The district includes several parcels adjacent to the river that could be enhanced through restoration efforts, while ensuring connectivity for the anticipated increase in residents, visitors, and recreational users in the area. This is an especially important priority due to the fact that downtown Reno is shifting form tourist commercial land uses to a mix of land uses with a large residential component.

A balance of natural habitat and recreational amenities should be emphasized in open space in the redevelopment areas.

River Inn Area

The vacant River Inn buildings and surrounding properties should be rehabilitated with an open space corridor included as part of any new development. Depending on the type of development that occurs, this could serve as an additional access point to the River for activities such as rafting, kayaking and fishing.

Boomtown-Garson Road Area

The portion of the river south of Boomtown has been zoned for commercial and residential development. The City should strive to preserve riparian habitat, along the river banks and incorporate the open space into the design of any development in the future. If this is accomplished it will ensure connectivity and access from the river corridor to public lands in the vicinity. This will also provide wildlife with access from the Peavine Range to the river.

Verdi

There is much land held in public ownership in the Verdi Area that should be preserved as riparian habitat. Limited public access could be continued to maintain habitat values in this area. Public agencies should be approached and zone changes suggested protecting these areas.

Steamboat Creek Corridor

The Steamboat Creek area offers one of the greatest remaining opportunities in the Truckee Meadows to create a linear open space area that would run adjacent to the creek (see Figure 2.8). This linear open space could potentially connect valuable wetland areas in the Reno SOI with

Steamboat Creek, south

Rosewood Lakes and Hidden Valley, Hidden Valley Regional Park, and ultimately the Truckee River to the north.

The City should actively support the efforts of the numerous private landowners and the Washoe-Storey Conservation District by incorporating the Steamboat Creek Restoration Plan into development guidelines for the Steamboat Creek area, as well as promoting this effort as an example for other smaller significant streams in the Reno SOI. Although the City should be the lead organization for conservation efforts in the SOI, conservation easements and outright land dedication along Steamboat Creek can be coordinated with the assistance of the Washoe-Storey Conservation District. Since the Steamboat Creek watershed falls within United States Army Corps of Engineers (USACE) purview as "waters of the United States" under Section 404 of the Clean Water Act, the USACE also reviews all pertinent construction activities along the creek.

The portion of Steamboat Creek in the Reno SOI reaches into the South Meadows area and Bella Vista Ranch. Much of this area is privately owned. The City should work with private landowners to identify possible open space easements. Areas with habitat and recreational value, such as Alexander Lake, in proximity to the creek should also be considered for acquisition.

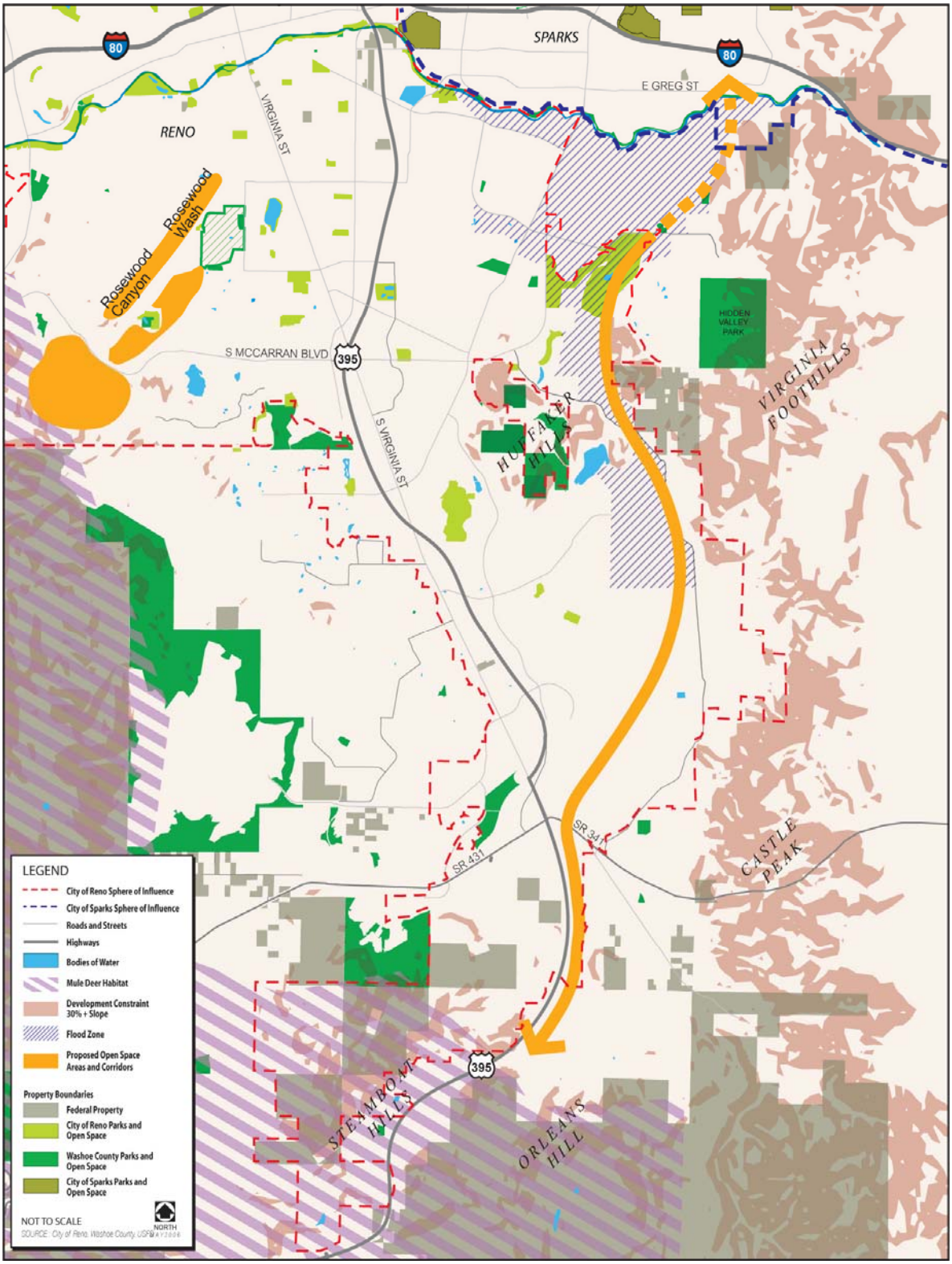
The northern portion of the creek is under County jurisdiction, but is critical to habitat protection and the creation of an open space corridor. The City should coordinate with the County to ensure connectivity between various reaches of the creek.

Steamboat Creek has been used in the Reno area for a variety of reasons over the years that include both agriculture and mining. This use has led to some environmental damage and concern. Steamboat Creek is the largest non-point pollution source to the Truckee River. Pollutants include naturally occurring arsenic and boron. Some pollutants, like mercury, are a result of historic mining activities. Much of the pollution is derived from several sources including livestock manure, residential and other uses of fertilizers and urban runoff from Reno.

Steamboat Creek is recognized as a significant resource to the Reno area and as a result a restoration plan was created to repair and control the pollution to this water way. The Steamboat Creek Restoration Plan emphasis maintaining public access to the creek while providing residents an opportunity to learn about this resource and ways they can help to protect them. The plan also focuses on working with adjacent land owners to prevent damage and reduce pollution. The Steamboat Creek Restoration Plan has been implemented on sections of the creek and continues to be with the help of residents and adjacent landowners. This plan will not supersede any of the policies

from the Steamboat Creek Restoration Plan and is only meant to further compliment progress made on the clean up of this area.

Figure 2.8 Steamboat Creek Open Space Corridors



Plants and Wildlife Habitat

Cassin's Finch

The open spaces in the plan area include diverse habitat zones ranging from mountain pine forests to sagebrush scrub and playa wetlands, and account for an equally abundant variety of plant and animal species. According to the Nevada Department of Wildlife, Nevada ranks eleventh among the 50 states in overall biological diversity. Approximately 3,000 plant species, 120 mammals, 340 birds, 55 reptiles and amphibians, 65 fish, and an unknown number of insect species occur in the state, although not all of the numbers reflect native species. 250 of these species are considered threatened, endangered, or are at risk of becoming extinct.

Rare species in the Truckee Meadows can be found on the lower slopes of Peavine Peak, on the lower slopes of the Carson Range, in the Steamboat geothermal area, and along the Steamboat Creek drainage. Plant and animal species in the Reno SOI can primarily be found within the five plant communities described below. These plant communities vary by such features as soil type, elevation, and water availability and typically have specific wildlife species associated with them (see Appendix D).

Riparian Areas

Agricultural grassland, Butler Ranch area

Riparian areas include those distinct plant communities adjacent to streams and rivers. Although riparian plant communities consist of a small portion of the Reno landscape due to the scarcity of water, they serve as critical centers of wildlife diversity, with more than 75 percent of bird and wildlife species spending some portion of their lives in them.

Agricultural and Natural Grasslands and Meadows

The Reno area historically encompassed many agricultural pasturelands, the most productive of which lay in the lowest portions of the valley and commonly had creeks and irrigation ditches crossing them. Remaining pasturelands in the Truckee Meadows include the University Farm, Butler Ranch, Bella Vista Ranch, and remnants of ranches along the foothills of the Carson Range, in Verdi, and in the Double Diamond/Damonte Ranch area. Pasturelands and associated wetlands, such as Alexander Lake and the wetlands found along Steamboat Creek, can provide groundwater recharge and floodplain functions.

Desert Playas

Desert playas are valley bottoms where seasonal water collects in pools during periods of high precipitation or run-off, but which have little or no water during drier portions of

the year. Playas that have a perennial source of water, such as Swan Lake, may shrink in size but not go completely dry. Playas in the SOI are located primarily in the North Valleys area.

Great Basin Mixed Sagebrush Shrubland

Sagebrush is one of the more common plants throughout northern Nevada, and is generally found in areas above 4,500 feet that receive at least 8 inches of precipitation per year. Great Basin mixed Sagebrush shrub communities are generally comprised of various species of shrubs, including Rabbitbrush, Desert Peach, Serviceberry, Mormon Tea, and Bitterbrush. Bitterbrush is a favorite food source for mule deer and is critical for their winter survival. Sage Sparrow, Sage Thrasher, Brewer's Sparrow, Greater-Sage Grouse, and Desert Horned Lizard are typically found in the sage community, although they have become rarer in recent years due to habitat loss.

Conifer Forests

Jeffery Pine

Conifer forests are found in the Carson Range along the western edge of the SOI and along the Verdi Range in northwestern Reno. The conifer forest in these areas is comprised of Jeffrey Pine, White Fir, Incense Cedar, with an occasional Ponderosa Pine. The rare Washoe Pine grows in Hunter Creek Canyon and Galena Creek. Common shrubs include Sagebrush, Snowberry, Gooseberry, Manzanita, and Bitterbrush. Mountain Mahogany is found scattered in the foothills, and Juniper grows in and around the Caughlin Ranch area.